Appendix 6.4-2: ALCS Analyses of NSDUH Data for Section 6.4 - Effect on Tobacco Use Initiation among Nonusers

1. **Statement of Purpose/ Objective:** To substantiate NSDUH analyses in section 6.4

2. **Source and data set up:** NSDUH Public Use File 2002-2015

   Data were downloaded from the NSDUH website,
   https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/64

   Analysis weight (analwt_c) was used to account for differential selection probabilities, nonresponse patterns, and post-stratification factors. Variance estimation was adjusted for cluster replicates (verep) and stratum (vestr). Data were set up using the following command in Stata 15.0:

   ```
   svyset verep [pweight=analwt_c], stra(vestr) single(centered)
   ```

3. **Summary of outcomes assessed**

   We conducted analysis for five outcomes using NSDUH public use files for section 6.4. All analyses were conducted using the NSDUH 2015 data, except for analyses for the last outcome "smokeless tobacco brand used most often during the past 30 days" which was conducted using 2002-2014 data. These outcomes are listed in the table below along with the survey questions and the variables used to derive the outcome variables.

	Outcome Measure	Corresponding Variables & Questions	
		Variable	**Question**
1	Ever use of Smokeless Tobacco	SMKLSSFLAG	NSDUH derived variable, mainly based on the question "Have you ever used snuff, even once?"
2	Past 30-day use of Smokeless Tobacco	SMKLSSMON	NSDUH derived variable, mainly based on the question "Now think about the past 30 days, that is from [DATEFILL] up to and including today. During the past 30 days, have you used snuff, even once?"
3	Frequent use of Smokeless Tobacco	SMKLSS30N	(Note: Frequent use was defined as at least 20 days of smokeless tobacco use during the past 30 days.) During the past 30 days, that is, since [DATEFILL], on how many days did you use snuff?
4	Percent reporting Past 30-day use of alcohol, marijuana, and tobacco products	ALCMON MRJMON CIGMON CGRMON SMKLSSMON	Similar variables to Outcome 2 (smklssmon) for each drug, including alcohol, marijuana, cigarettes, and cigars.
5	Smokeless tobacco brand used most often during the past 30 days	SLT30BR2	During the past 30 days, what brand of snuff did you use most often?

4. **User Groups**

   This section describes the definition of the user groups and variables used to identify these groups, as presented in section 6.4.

User Groups	Definitions	Variables / Syntax
Youth (12-17 year olds)	Adolescents 12-17 years of age at the time of assessment	AGE2>=1 & AGE2<=6
Young Adults (18-25 year olds)	Young adults 18-25 years of age at the time of assessment	AGE2>=7 & AGE2<=12
Youth (12-17 year olds) reporting past 30-day use of alcohol	Adolescents 12-17 years of age at the time of assessment who drank alcohol during the past 30 days	AGE2>=1 & AGE2<=6 & ALCMON ==1
Youth (12-17 year olds) reporting past 30-day use of marijuana	Adolescents 12-17 years of age at the time of assessment who used marijuana during the past 30 days	AGE2>=1 & AGE2<=6 & MRJMON ==1
Youth (12-17 year olds) reporting past 30-day use of cigarettes	Adolescents 12-17 years of age at the time of assessment who smoked cigarettes during the past 30 days	AGE2>=1 & AGE2<=6 & CIGMON ==1
Youth (12-17 year olds) reporting past 30-day use of cigars	Adolescents 12-17 years of age at the time of assessment who smoked cigars during the past 30 days	AGE2>=1 & AGE2<=6 & CGRMON ==1
Youth (12-17 year olds) reporting past 30-day use of smokeless tobacco	Adolescents 12-17 years of age at the time of assessment who used smokeless tobacco during the past 30 days	AGE2>=1 & AGE2<=6 & SMKLSSMON ==1

Footnote: In NSDUH 2015 data, n=13,585 for 12-17 year olds and n=14,553 for 18-25 year olds. Sample sizes (n) are 1420, 1015, 654, 296, and 236 for 12-17 year olds who used alcohol, marijuana, cigarettes, cigars, and smokeless tobacco during the past 30 days, respectively.

Sample sizes may vary from one analysis to another due to missing values ("don't' know" and "refused" answers as well as improbably responses removed by NSDUH team) on the outcome variables. Actual sample size for each analysis is shown in the size of the subgroup population (i.e., "Subpop. no. obs" in the output).

5. **Results: Syntax and Output**

In this section, we present Stata syntax and original output tables to generate results shown in section 6.4.

5.1. Outcome 1: Ever use of Smokeless Tobacco

* Table 1. Syntax and output for ever use of smokeless tobacco among 12-17 year olds

```
. svy, subpop(if age2>=1 & age2<=6): tab smklssflag, perc ci format(%2.1f)
(running tabulate on estimation sample)


Number of strata    =          50       Number of obs     =       57,146
Number of PSUs      =         100       Population size    =  267,694,489
                                        Subpop. no. obs    =       13,585
                                        Subpop. size       = 24,893,417.4
                                        Design df          =           50


            -------------------------------------------------
RC-SMOKEL |
ESS       |
TOBACCO - |
EVER USED | percentage            lb           ub
----------+--------------------------------------------------
 0 - Neve |        94.3          93.8         94.8
 1 - Ever |         5.7           5.2          6.2
          |
    Total |       100.0
            -------------------------------------------------
  Key:  percentage   =  cell percentage
        lb           =  lower 95% confidence bound for cell percentage
        ub           =  upper 95% confidence bound for cell percentage
```

* Table 2. Syntax and output for ever use of smokeless tobacco among 18-25 year olds

```
. svy, subpop(if age2>=7 & age2<=12): tab smklssflag, perc ci format(%2.1f)
(running tabulate on estimation sample)


Number of strata   =        50         Number of obs    =      57,146
Number of PSUs     =       100         Population size  = 267,694,489
                                       Subpop. no. obs  =      14,553
                                       Subpop. size     = 34,907,161.6
                                       Design df        =          50



           ------------------------------------------------
RC-SMOKEL |
ESS       |
TOBACCO - |
EVER USED | percentage           lb           ub
----------+-------------------------------------------------
 0 - Neve |        80.3         79.4         81.2
 1 - Ever |        19.7         18.8         20.6
          |
    Total |       100.0
           ------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

5.2. Outcome 2: Past 30-day use of Smokeless Tobacco

* Table 3. Syntax and output for past 30-day use of smokeless tobacco among 12-17 year olds

```
. svy, subpop(if age2>=1 & age2<=6): tab smklssmon, perc ci format(%2.1f)
(running tabulate on estimation sample)


Number of strata    =          50        Number of obs    =        57,146
Number of PSUs      =         100        Population size   =   267,694,489
                                         Subpop. no. obs   =        13,585
                                         Subpop. size      =  24,893,417.4
                                         Design df         =            50


            -------------------------------------------------
RC-SMOKEL   |
ESS         |
TOBACCO -   |
PAST        |
MONTH USE   | percentage          lb          ub
------------+------------------------------------------------
  0 - Did   |        98.5        98.2        98.7
  1 - Used  |         1.5         1.3         1.8
            |
    Total   |       100.0
            -------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

* Table 4. Syntax and output for past 30-day use of smokeless tobacco among 18-25 year olds

```
. svy, subpop(if age2>=7 & age2<=12): tab smklssmon, perc ci format(%2.1f)
(running tabulate on estimation sample)


Number of strata   =         50       Number of obs    =       57,146
Number of PSUs     =        100       Population size   = 267,694,489
                                      Subpop. no. obs   =       14,553
                                      Subpop. size      = 34,907,161.6
                                      Design df         =           50


      -----------------------------------------------
      RC-SMOKEL |
      ESS       |
      TOBACCO - |
      PAST      |
      MONTH USE | percentage         lb          ub
      ----------+------------------------------------
        0 - Did |      94.5        93.9        95.0
       1 - Used |       5.5         5.0         6.1
                |
          Total |     100.0
      -----------------------------------------------
        Key:  percentage  =  cell percentage
              lb          =  lower 95% confidence bound for cell percentage
              ub          =  upper 95% confidence bound for cell percentage
```

5.3. Outcome 3: Past 30-day frequent use of smokeless tobacco

*Syntax used to generate the variable of past 30-day frequent use of smokeless tobacco

```
recode smklss30n (0/19=0) (91/93=0) (20/30=1) (else=.), gen(smkl20)
```

* Table 5. Syntax and output for past 30-day frequent use of smokeless tobacco among 12-17 year olds

```
. svy, subpop(if age2>=1 & age2<=6): tab smkl20, perc ci format(%2.1f)
(running tabulate on estimation sample)


Number of strata   =          50        Number of obs    =        57,102
Number of PSUs     =         100        Population size  =   267,621,481
                                        Subpop. no. obs  =        13,541
                                        Subpop. size     = 24,820,409.2
                                        Design df        =            50


        ------------------------------------------------
        RECODE of |
        smklss30n |
        (HOW MANY |
        DAYS USED |
        SMOKELESS |
        TOBACCO   |
        PAST 30   |
        DAYS)     | percentage         lb          ub
        ----------+-------------------------------------
              0 |      99.6        99.4        99.7
              1 |       0.4         0.3         0.6
                |
          Total |     100.0
        ------------------------------------------------
          Key:  percentage  =  cell percentage
                lb          =  lower 95% confidence bound for cell percentage
                 ub          =  upper 95% confidence bound for cell percentage
```

* Table 6. Syntax and output for past 30-day frequent use of smokeless tobacco among 18-25 year olds

```
. svy, subpop(if age2>=7 & age2<=12): tab smkl20, perc ci format(%2.1f)
(running tabulate on estimation sample)


Number of strata    =          50        Number of obs     =        57,138
Number of PSUs      =         100        Population size   =   267,668,717
                                         Subpop. no. obs   =        14,545
                                         Subpop. size      = 34,881,389.3
                                         Design df         =            50


            ----------------------------------------------
            RECODE of |
            smklss30n |
            (HOW MANY |
            DAYS USED |
            SMOKELESS |
            TOBACCO   |
            PAST 30   |
            DAYS)     | percentage         lb          ub
            ----------+-----------------------------------
                    0 |       97.3        96.9        97.6
                    1 |        2.7         2.4         3.1
                      |
                Total |      100.0
            ----------------------------------------------
              Key:  percentage  =  cell percentage
                    lb          =  lower 95% confidence bound for cell percentage
                    ub          =  upper 95% confidence bound for cell percentage
```

5.4. Outcome 4: Past 30-day use of alcohol, marijuana, cigarettes, cigars, and smokeless tobacco

5.4.1 Among all adolescents 12-17 years of age

* Table 7. Syntax and output for past 30-day use of alcohol, marijuana, cigarettes, cigars, and smokeless tobacco among 12-17 year olds

```
. foreach var of varlist alcmon mrjmon cigmon cgrmon smklssmon {
  2. dis "30-day use of `var' among adolescents"
  3. svy, subpop(if age2>=1 & age2<=6): tab `var', perc ci format(%2.1f)
  4. }
30-day use of alcmon among adolescents
(running tabulate on estimation sample)


Number of strata    =          50        Number of obs    =       57,146
Number of PSUs      =         100        Population size  =  267,694,489
                                         Subpop. no. obs  =       13,585
                                         Subpop. size     = 24,893,417.4
                                         Design df        =           50


          -------------------------------------------------
RC-ALCOHO |
L - PAST  |
MONTH USE | percentage            lb          ub
----------+--------------------------------------------
  0 - Did |        90.1         89.5        90.6
 1 - Used |         9.9          9.4        10.5
          |
    Total |       100.0
          -------------------------------------------------

  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of mrjmon among adolescents
(running tabulate on estimation sample)


Number of strata   =        50        Number of obs    =        57,146
Number of PSUs     =       100        Population size  =   267,694,489
                                      Subpop. no. obs  =        13,585
                                      Subpop. size     = 24,893,417.4
                                      Design df        =            50


          --------------------------------------------------
RC-MARIJU |
ANA -     |
PAST      |
MONTH USE | percentage            lb            ub
----------+---------------------------------------------
  0 - Did |       92.9          92.3          93.4
 1 - Used |        7.1           6.6           7.7
          |
    Total |      100.0
          --------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of cigmon among adolescents
(running tabulate on estimation sample)


Number of strata   =        50        Number of obs    =        57,146
Number of PSUs     =       100        Population size  = 267,694,489
                                      Subpop. no. obs  =        13,585
                                      Subpop. size     = 24,893,417.4
                                      Design df        =            50


          --------------------------------------------------
RC-CIGARE |
TTES -    |
PAST      |
MONTH USE | percentage           lb           ub
----------+---------------------------------------------
  0 - Did |        95.5         95.1         95.9
 1 - Used |         4.5          4.1          4.9
          |
    Total |       100.0
          --------------------------------------------------
   Key:  percentage  =  cell percentage
         lb          =  lower 95% confidence bound for cell percentage
         ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of cgrmon among adolescents
(running tabulate on estimation sample)


Number of strata   =         50        Number of obs     =        57,146
Number of PSUs     =        100        Population size   =   267,694,489
                                       Subpop. no. obs   =        13,585
                                       Subpop. size      =  24,893,417.4
                                       Design df         =            50


         ------------------------------------------------
RC-CIGARS |
- PAST    |
MONTH USE | percentage            lb            ub
----------+-------------------------------------------
  0 - Did |        98.0          97.7          98.3
 1 - Used |         2.0           1.7           2.3
          |
    Total |       100.0
         ------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of smklssmon among adolescents
(running tabulate on estimation sample)


Number of strata   =         50        Number of obs    =       57,146
Number of PSUs     =        100        Population size  =  267,694,489
                                       Subpop. no. obs  =       13,585
                                       Subpop. size     = 24,893,417.4
                                       Design df        =           50


-------------------------------------------------
RC-SMOKEL |
ESS       |
TOBACCO - |
PAST      |
MONTH USE | percentage          lb          ub
----------+--------------------------------------
  0 - Did |       98.5        98.2        98.7
 1 - Used |        1.5         1.3         1.8
          |
    Total |      100.0
-------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

5.4.2 Among adolescents who drank alcohol during the past 30 days

* Table 8. Syntax and output for past 30-day use of marijuana, cigarettes, cigars, and smokeless tobacco among adolescents who drank alcohol during the past 30 days

```
. foreach var1 of varlist mrjmon cigmon cgrmon smklssmon {
  2. dis "30-day use of `var1' among adolescents who used alcohol in the past month"
  3. svy, subpop(if age2>=1 & age2<=6 & alcmon==1): tab `var1', perc ci format(%2.0f)
  4. }
30-day use of mrjmon among adolescents who used alcohol in the past month
(running tabulate on estimation sample)


Number of strata   =          50          Number of obs      =       57,146
Number of PSUs     =         100          Population size    =  267,694,489
                                          Subpop. no. obs    =        1,420
                                          Subpop. size       = 2,464,203.23
                                          Design df          =           50


          -------------------------------------------------
RC-MARIJU |
ANA -     |
PAST      |
MONTH USE | percentage          lb          ub
----------+--------------------------------------
  0 - Did |          61          57          64
 1 - Used |          39          36          43
          |
    Total |         100
          -------------------------------------------------

  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of cigmon among adolescents who used alcohol in the past month
(running tabulate on estimation sample)


Number of strata   =         50       Number of obs     =       57,146
Number of PSUs     =        100       Population size   =  267,694,489
                                      Subpop. no. obs   =        1,420
                                      Subpop. size      = 2,464,203.23
                                      Design df         =           50


           -------------------------------------------------
RC-CIGARE |
TTES -    |
PAST      |
MONTH USE | percentage         lb          ub
----------+--------------------------------------
  0 - Did |         76          73          78
 1 - Used |         24          22          27
          |
    Total |        100
           -------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of cgrmon among adolescents who used alcohol in the past month
(running tabulate on estimation sample)


Number of strata   =        50        Number of obs     =        57,146
Number of PSUs     =       100        Population size   =   267,694,489
                                       Subpop. no. obs   =         1,420
                                       Subpop. size      =  2,464,203.23
                                       Design df         =            50


          -------------------------------------------------
RC-CIGARS |
- PAST    |
MONTH USE | percentage          lb          ub
----------+--------------------------------------
  0 - Did |          88          86          89
 1 - Used |          12          11          14
          |
    Total |         100
          -------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of smklssmon among adolescents who used alcohol in the past month
(running tabulate on estimation sample)


Number of strata   =          50        Number of obs      =        57,146
Number of PSUs     =         100        Population size    =   267,694,489
                                        Subpop. no. obs    =         1,420
                                        Subpop. size       = 2,464,203.23
                                        Design df          =            50


         -------------------------------------------------
RC-SMOKEL |
ESS       |
TOBACCO - |
PAST      |
MONTH USE | percentage          lb          ub
----------+--------------------------------------
 0 - Did  |         91          89          93
 1 - Used |          9           7          11
          |
   Total  |        100
         -------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

5.4.3 Among adolescents who used marijuana during the past 30 days

* Table 9. Syntax and output for past 30-day use of alcohol, cigarettes, cigars, and smokeless tobacco among adolescents who used marijuana during the past 30 days

```
. foreach var1 of varlist alcmon cigmon cgrmon smklssmon {
  2. dis "30-day use of `var1' among adolescents who used marijuana in the past month"
  3. svy, subpop(if age2>=1 & age2<=6 & mrjmon==1): tab `var1', perc ci format(%2.0f)
  4. }
30-day use of alcmon among adolescents who used marijuana in the past month
(running tabulate on estimation sample)
```

```
Number of strata   =        50        Number of obs     =      57,146
Number of PSUs     =       100        Population size   = 267,694,489
                                      Subpop. no. obs   =       1,015
                                      Subpop. size      = 1,764,640.81
                                      Design df         =          50
```

```
-----------------------------------------------
RC-ALCOHO |
L - PAST  |
MONTH USE | percentage          lb          ub
----------+------------------------------------
  0 - Did |         45          41          50
 1 - Used |         55          50          59
          |
    Total |        100
-----------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

30-day use of cigmon among adolescents who used marijuana in the past month
(running tabulate on estimation sample)

```
Number of strata   =        50        Number of obs      =       57,146
Number of PSUs     =       100        Population size    =  267,694,489
                                       Subpop. no. obs    =        1,015
                                       Subpop. size       = 1,764,640.81
                                       Design df          =           50


         --------------------------------------------------
RC-CIGARE |
TTES -    |
PAST      |
MONTH USE | percentage          lb          ub
----------+---------------------------------------
  0 - Did |          65          61          69
 1 - Used |          35          31          39
          |
    Total |         100
         --------------------------------------------------
```

   Key: percentage = cell percentage
         lb   = lower 95% confidence bound for cell percentage
         ub   = upper 95% confidence bound for cell percentage

```
30-day use of cgrmon among adolescents who used marijuana in the past month
(running tabulate on estimation sample)


Number of strata   =          50        Number of obs     =        57,146
Number of PSUs     =         100        Population size   =   267,694,489
                                         Subpop. no. obs   =         1,015
                                         Subpop. size      = 1,764,640.81
                                         Design df         =            50


-------------------------------------------------
RC-CIGARS |
- PAST    |
MONTH USE | percentage          lb        ub
----------+--------------------------------------
  0 - Did |          82          78        85
 1 - Used |          18          15        22
          |
    Total |         100
-------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of smklssmon among adolescents who used marijuana in the past month
(running tabulate on estimation sample)


Number of strata   =          50        Number of obs    =      57,146
Number of PSUs     =         100        Population size  = 267,694,489
                                        Subpop. no. obs  =       1,015
                                        Subpop. size     = 1,764,640.81
                                        Design df        =          50


          -------------------------------------------------
RC-SMOKEL |
ESS       |
TOBACCO - |
PAST      |
MONTH USE | percentage         lb          ub
----------+--------------------------------------
  0 - Did |         92         90          94
  1 - Used|          8          6          10
          |
    Total |        100
          -------------------------------------------------
   Key:  percentage  =  cell percentage
         lb          =  lower 95% confidence bound for cell percentage
         ub          =  upper 95% confidence bound for cell percentage
```

5.4.4 Among adolescents who smoked cigarettes during the past 30 days
* Table 10. Syntax and output for past 30-day use of alcohol, marijuana, cigars, and smokeless tobacco among adolescents who smoked cigarettes during the past 30 days

```
. foreach var1 of varlist alcmon mrjmon cgrmon smklssmon {
  2. dis "30-day use of `var1' among adolescents who smoked cigarettes in the past month"
  3. svy, subpop(if age2>=1 & age2<=6 & cigmon==1): tab `var1', perc ci format(%2.0f)
  4. }
30-day use of alcmon among adolescents who smoked cigarettes in the past month
(running tabulate on estimation sample)


Number of strata   =         50        Number of obs     =      57,146
Number of PSUs     =        100        Population size   = 267,694,489
                                       Subpop. no. obs   =         654
                                       Subpop. size      = 1,110,587.51
                                       Design df         =          50


------------------------------------------------
RC-ALCOHO |
L - PAST  |
MONTH USE | percentage        lb         ub
----------+-------------------------------------
  0 - Did |         46        40         52
 1 - Used |         54        48         60
          |
    Total |        100
------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of mrjmon among adolescents who smoked cigarettes in the past month
(running tabulate on estimation sample)


Number of strata   =        50        Number of obs      =      57,146
Number of PSUs     =       100        Population size    = 267,694,489
                                      Subpop. no. obs    =         654
                                      Subpop. size       = 1,110,587.51
                                      Design df          =          50


           --------------------------------------------------
RC-MARIJU |
ANA -     |
PAST      |
MONTH USE | percentage            lb          ub
----------+---------------------------------------
 0 - Did  |          44           38          50
 1 - Used |          56           50          62
          |
   Total  |         100
           --------------------------------------------------

  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

30-day use of cgrmon among adolescents who smoked cigarettes in the past month
(running tabulate on estimation sample)

```
Number of strata   =          50        Number of obs     =        57,146
Number of PSUs     =         100        Population size   =   267,694,489
                                         Subpop. no. obs   =           654
                                         Subpop. size      = 1,110,587.51
                                         Design df         =            50


          ------------------------------------------------
RC-CIGARS |
- PAST    |
MONTH USE | percentage          lb          ub
----------+-------------------------------------
  0 - Did |          78          74          82
 1 - Used |          22          18          26
          |
    Total |         100
          ------------------------------------------------
   Key:  percentage  =  cell percentage
         lb          =  lower 95% confidence bound for cell percentage
         ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of smklssmon among adolescents who smoked cigarettes in the past month
(running tabulate on estimation sample)


Number of strata   =         50        Number of obs      =       57,146
Number of PSUs     =        100        Population size    =  267,694,489
                                       Subpop. no. obs    =          654
                                       Subpop. size       = 1,110,587.51
                                       Design df          =           50


          --------------------------------------------------
RC-SMOKEL |
ESS       |
TOBACCO - |
PAST      |
MONTH USE | percentage          lb          ub
----------+---------------------------------------
  0 - Did |         84          80          88
 1 - Used |         16          12          20
          |
    Total |        100
          --------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

5.4.5 Among adolescents who smoked cigars during the past 30 days

* Table 11. Syntax and output for past 30-day use of alcohol, marijuana, cigarettes, and smokeless tobacco among adolescents who smoked cigars during the past 30 days

```
. foreach var1 of varlist alcmon mrjmon cigmon smklssmon {
  2. dis "30-day use of `var1' among adolescents who smoked cigars in the past month"
  3. svy, subpop(if age2>=1 & age2<=6 & cgrmon==1): tab `var1', perc ci format(%2.0f)
  4. }
30-day use of alcmon among adolescents who smoked cigars in the past month
(running tabulate on estimation sample)


Number of strata   =          49      Number of obs     =        56,119
Number of PSUs     =          98      Population size   =   264,179,184
                                      Subpop. no. obs   =           296
                                      Subpop. size      = 488,305.2385
                                      Design df         =            49


          -------------------------------------------------
RC-ALCOHO |
L - PAST  |
MONTH USE | percentage          lb          ub
----------+--------------------------------------------------
  0 - Did |          38          30          46
 1 - Used |          62          54          70
          |
    Total |         100
          -------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of mrjmon among adolescents who smoked cigars in the past month
(running tabulate on estimation sample)


Number of strata   =         49        Number of obs     =         56,119
Number of PSUs     =         98        Population size   =    264,179,184
                                       Subpop. no. obs   =            296
                                       Subpop. size      = 488,305.2385
                                       Design df         =             49


          -------------------------------------------------
RC-MARIJU |
ANA -     |
PAST      |
MONTH USE | percentage          lb          ub
----------+--------------------------------------
  0 - Did |         34          27          41
 1 - Used |         66          59          73
          |
    Total |        100
          -------------------------------------------------

  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

30-day use of cigmon among adolescents who smoked cigars in the past month
(running tabulate on estimation sample)

```
Number of strata   =         49        Number of obs     =       56,119
Number of PSUs     =         98        Population size   =  264,179,184
                                        Subpop. no. obs   =          296
                                        Subpop. size      = 488,305.2385
                                        Design df         =           49


           -------------------------------------------------
RC-CIGARE |
TTES -    |
PAST      |
MONTH USE | percentage          lb          ub
----------+--------------------------------------
  0 - Did |         50          42          58
 1 - Used |         50          42          58
          |
    Total |        100
           -------------------------------------------------

   Key:  percentage  =  cell percentage
         lb          =  lower 95% confidence bound for cell percentage
         ub          =  upper 95% confidence bound for cell percentage
```

```
30-day use of smklssmon among adolescents who smoked cigars in the past month
(running tabulate on estimation sample)


Number of strata   =         49        Number of obs       =        56,119
Number of PSUs     =         98        Population size     =   264,179,184
                                       Subpop. no. obs     =           296
                                       Subpop. size        = 488,305.2385
                                       Design df           =            49


         ------------------------------------------------
RC-SMOKEL |
ESS       |
TOBACCO - |
PAST      |
MONTH USE | percentage         lb          ub
----------+-------------------------------------
 0 - Did  |          83         77          88
 1 - Used |          17         12          23
          |
   Total  |         100
         ------------------------------------------------
  Key:  percentage  =  cell percentage
         lb         =  lower 95% confidence bound for cell percentage
         ub         =  upper 95% confidence bound for cell percentage
```

5.4.6 Among adolescents who used smokeless tobacco during the past 30 days

* Table 12. Syntax and output for past 30-day use of alcohol, marijuana, cigarettes, and cigars among adolescents who used smokeless tobacco during the past 30 days

```
. foreach var1 of varlist alcmon mrjmon cigmon cgrmon {
  2. dis "30-day use of `var1' among adolescents who used smokeless tobacco in the past
month"
  3. svy, subpop(if age2>=1 & age2<=6 & smklssmon==1): tab `var1', perc ci format(%2.1f)
  4. }
30-day use of alcmon among adolescents who used smokeless tobacco in the past month
(running tabulate on estimation sample)
```

```
Number of strata   =        49        Number of obs     =       55,839
Number of PSUs     =        98        Population size   =  261,055,715
                                      Subpop. no. obs   =          236
                                      Subpop. size      =  370,754.4163
                                      Design df         =           49


         --------------------------------------------------
RC-ALCOHO |
L - PAST  |
MONTH USE | percentage           lb          ub
----------+---------------------------------------
  0 - Did |      42.7          33.1        52.9
 1 - Used |      57.3          47.1        66.9
          |
    Total |     100.0
         --------------------------------------------------

  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

30-day use of mrjmon among adolescents who used smokeless tobacco in the past month
(running tabulate on estimation sample)

```
Number of strata   =        49        Number of obs    =        55,839
Number of PSUs     =        98        Population size  =   261,055,715
                                      Subpop. no. obs  =           236
                                      Subpop. size     = 370,754.4163
                                      Design df        =            49


             -------------------------------------------------
RC-MARIJU |
ANA -     |
PAST      |
MONTH USE | percentage          lb           ub
----------+--------------------------------------------------
  0 - Did |        61.1        52.4         69.0
 1 - Used |        38.9        31.0         47.6
          |
    Total |       100.0
             -------------------------------------------------

  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

30-day use of cigmon among adolescents who used smokeless tobacco in the past month
(running tabulate on estimation sample)

```
Number of strata  =        49        Number of obs    =        55,839
Number of PSUs    =        98        Population size  =   261,055,715
                                     Subpop. no. obs  =           236
                                     Subpop. size     = 370,754.4163
                                     Design df        =            49


       -------------------------------------------------
RC-CIGARE |
TTES -    |
PAST      |
MONTH USE | percentage         lb           ub
----------+--------------------------------------------
  0 - Did |       53.5        43.9         62.9
  1 - Used |      46.5        37.1         56.1
          |
    Total |      100.0
       -------------------------------------------------
```

   Key: percentage = cell percentage
         lb   = lower 95% confidence bound for cell percentage
         ub   = upper 95% confidence bound for cell percentage

30-day use of cgrmon among adolescents who used smokeless tobacco in the past month
(running tabulate on estimation sample)

```
Number of strata   =        49        Number of obs     =        55,839
Number of PSUs     =        98        Population size   =   261,055,715
                                       Subpop. no. obs   =           236
                                       Subpop. size      = 370,754.4163
                                       Design df         =            49
```

```
-------------------------------------------------
RC-CIGARS |
- PAST    |
MONTH USE | percentage        lb          ub
----------+--------------------------------------
  0 - Did |      77.5        70.2        83.5
  1 - Used|      22.5        16.5        29.8
          |
    Total |     100.0
-------------------------------------------------
  Key:  percentage  =  cell percentage
        lb          =  lower 95% confidence bound for cell percentage
        ub          =  upper 95% confidence bound for cell percentage
```

5.5. Outcome 5: Smokeless tobacco brand used most often during the past 30 days

Analysis for Outcome 5 was conducted using SAS 9.3. SAS codes and output excerpts are provided below.

* Table 13. Syntax and output for smokeless tobacco brand used most often during the past 30 days among 12-17 year olds

```
/*Macro to Extract Past 30-Day Smokeless Tobacco Users Aged 12 to 17 Years Who Reported Using
[Brand] Most Often during the Past 30 Days*/
/*NSDUH 2002 to 2014*/
/*SLT30BR2 - SMKLSS TOB BRAND USED MOST OFTEN PAST MO - RECODE*/
%Macro NSDUH_Q1(age_var);
%do year=2002 %to 2014;
LIBNAME  NSDUH     "D:\NSDUH\NSDUH&year.\";
LIBNAME  LIBRARY   "D:\NSDUH\NSDUH&year.\";
/*********** Smoking prevalence ***********/
proc surveyfreq data=NSDUH.Nsduh&year. missing;
tables SLT30BR2 ;
CLUSTER VEREP;
WEIGHT ANALWT C;
where CATAGE=&age_var and SLTREC=1;
ods output OneWay=OneWay&year;
TITLE1 "&year";
run;

data OneWay&year(rename=(Percent=y&year));
set OneWay&year;
where (F_SLT30BR2 contains "Grizzly") or (F_SLT30BR2 contains "Copenhagen") or  (F_SLT30BR2
contains "Skoal") or  (F_SLT30BR2 contains "Red Man") ;
keep F_SLT30BR2 Percent;
run;
%end;
%Mend NSDUH_Q1;


%NSDUH_Q1(1);
```

[Example SAS Output]

2002

The SURVEYFREQ Procedure

SMKLSS TOB BRAND USED MOST OFTEN PAST MO - RECODE					
SLT30BR2	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(0208) Red Man	21	24440	6016	5.1171	0.9450
(0301) Copenhagen	79	104390	1234	21.8566	1.6021
(0308) Skoal	124	169960	3959	35.5852	1.3588
(0332) Grizzly	2	2979	2979	0.6236	0.5853

[Figure Data]

SLT30BR2 - SMKLSS TOB BRAND USED MOST OFTEN PAST MO - RECODE

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Red Man	5.1	5.5	4.6	6.9	5.9	5.1	3.3	6.5	8.9	4.6	6.1	9.3	7.6
Copenhagen	21.9	21.5	20.8	18.5	18.1	16.4	16.7	12.5	17.8	17.6	23.0	34.6	35.7
Skoal	35.6	32.6	34.1	30.1	29.7	27.8	28.3	21.7	17.3	16.5	10.2	6.7	9.6
Grizzly	0.6	4.4	8.9	20.4	23.6	31.9	33.2	36.5	32.4	37.6	41.7	33.8	32.1

	Brand Cited Most Often	**Brand Cited 2nd Most Often**	**Brand Cited 3rd Most Often**
2002	Skoal	Copenhagen	Red Man
2003	Skoal	Copenhagen	Red Man
2004	Skoal	Copenhagen	Grizzly
2005	Skoal	Grizzly	Copenhagen
2006	Skoal	Grizzly	Copenhagen
2007	Grizzly	Skoal	Copenhagen
2008	Grizzly	Skoal	Copenhagen
2009	Grizzly	Skoal	Copenhagen
2010	Grizzly	Copenhagen	Skoal
2011	Grizzly	Copenhagen	Skoal
2012	Grizzly	Copenhagen	Skoal
2013	Copenhagen	Grizzly	Red Man
2014	Copenhagen	Grizzly	Skoal